

Amendments to the Drawings:

Applicants are submitting a separate submission of formal drawings.

REMARKS

Reconsideration of this application is respectfully requested. Claims 1-11 and 26-28 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 6,021,237 by Kim et al. (hereinafter "Kim"). Claims 12-20 and 29-32 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 4,706,229 by Congdon et al. (hereinafter "Congdon"). Claims 21-25 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12, 19, 20, and 22-26 have been amended. Claims 18, 21, and 29-32 have been canceled without prejudice.

The Examiner has rejected claims 1-11 and 26-28 under 35 U.S.C. § 102(b) as being anticipated by Kim. However, applicants respectfully asserts that claim 1 is not anticipated by Kim under 35 U.S.C. § 102(b).

Claim 1 states:

1. A method to reduce optical intensity modulation, comprising:
generating a spiral wave onto an acoustic-optic interaction portion of an optical fiber within an acousto-optic filter in order to create reflected wave components that are orthogonal with respect to wave components that are originally launched onto said interaction portion.

(Emphasis Added)

In contrast, columns 3-4 of the Kim reference state that the acoustic wave generator 111 generates a flexural incident wave to interact with a portion of the optical fiber 122. (Kim, Col. 4, Lns. 1-27) The incident flexural wave causes microbending in the fiber. (Kim, Col. 4, Lns. 1-27) However, a flexural wave propagates in an accordion

like side-to-side movement rather than propagating in a spiral manner. Also, Kim is completely silent regarding what happens to the reflected wave that corresponds to the incident flexural wave. By the way, Mr. Kim, Mr. Yun, and Mr. Hwang are inventors in this current application and also in the Kim reference. The Kim reference is silent in regards to the orientation of the reflected wave. However, applicants assert that the reflected wave in the Kim reference would be oriented identically to the incident flexural wave. Therefore, Kim does not disclose each and every limitation of claim 1. As such, claim 1 is not anticipated by Kim under 35 U.S.C. § 102(b).

Given that claims 2-10 depend from and include the limitations of claim 1, applicants submit that claims 2-10 are not anticipated by Kim under 35 U.S.C. § 102(b).

Likewise, applicants respectfully asserts that claim 26 is not anticipated by Kim under 35 U.S.C. § 102(b).

Claim 26 states:

26. An apparatus, comprising:

an acousto-optic filter having a horn with an elliptical cross section coupled to a transducer, wherein the acousto-optic filter and transducer cooperate to generate spiraling acoustic waves; and

an acoustic-optic interaction portion of an optical fiber to interact with the spiraling acoustic waves and create reflected wave components that are orthogonal with respect to wave components that are originally launched onto said interaction portion.

(Emphasis Added)

As discussed above, the Kim reference does not disclose an “acousto-optic filter and transducer cooperating to generate spiraling acoustic waves. . . that create reflected wave components that are orthogonal with respect to wave components that are originally launched onto said interaction portion.” Therefore, Kim does not disclose

each and every limitation of claim 26. As such, claim 26, as amended, is not anticipated by Kim under 35 U.S.C. § 102(b).

Given that claims 27-28 depend from and include the limitations of claim 26, applicants submit that claims 27-28 are not anticipated by Kim under 35 U.S.C. § 102(b).

The Examiner has rejected claims 12-20 and 29-32 under 35 U.S.C. § 102(b) as being anticipated by Congdon and objected to claim 21 as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully submit that claim 12, as amended, includes the limitations formerly in claim 21.

Claim 12, as amended, states:

12. A transducer, comprising:
a first section and a second section, said first and second sections each having a polling direction along a first axis; and
a third section and a fourth section, said third and fourth sections each having a polling direction along a second axis, said third and fourth sections each between said first and second sections, wherein said transducer is configured to receive a first signal at said first section and receive a second signal at said third section, said first signal includes a first component having a first frequency and a second component having a second frequency, and, said second signal includes a first component having said first frequency and a second component having said second frequency, said first component of said first signal having a phase difference with respect to said first component of said second signal, said second component of said first signal having a phase difference with respect to said second component of said second signal to generate a first spiraling wave and a second spiraling wave where said first spiraling wave is orthogonal to said second spiraling wave.

Therefore, Congdon does not disclose each and every limitation of claim 12. As such, claim 12, as amended, is not anticipated by Congdon under 35 U.S.C. § 102(b).

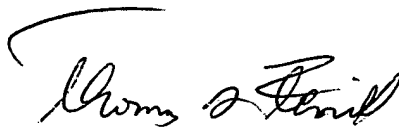
Given that claims 13-17, 19, 20, and 22-25 depend from and include the limitations of claim 12, applicants submit that claims 13-17, 19, 20, and 22-25 are not anticipated by Congdon under 35 U.S.C. § 102(b).

Conclusion

It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections and objections have been overcome. A petition for an extension of time is submitted with this amendment. Applicants reserve all rights with respect to the application of the doctrine equivalents. If there are any additional charges, please charge them to our Deposit Account No. 02-2666. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,
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Dated: February 22, 2005



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